

REMARKS

The Office Action mailed July 2, 2003 has been carefully considered.

Claims 12 and 15 have been cancelled. Applicant reserves the right to file a divisional application covering the subject matter of these claims.

The specification has been amended to include the unabbreviated form of the PUR/PIR foam.

Claims 1-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Larson in view of Sulzbach et al. It is the Examiner's position that Larson discloses various aspects of the claimed invention. However, the examiner acknowledges that Larson does not teach transverse movement of the applicator. It is Examiner's position that it would have been obvious to one of ordinary skill in the art to incorporate the transversely reciprocating applicator taught by Sulzbach et al. into the method of Larson in order to ensure that the width of the lower skin is covered by reactants.

For the reasons discussed below, applicant respectfully traverses this position taken by the Examiner.

It is an important feature of the claimed invention that the applicator or the discharge orifice have a two-dimensionally movement. Claim 1 explicitly states that the applicator and the discharge orifice are moved two-dimensionally wherein one direction corresponds to the transverse movement and the other direction corresponds to a longitudinal movement.

The Examiner has acknowledged that the primary Larson reference does not disclose or teach a second or transverse movement of the applicator. The application of Larson comprises several parallel discharge orifices that are fixed and do not move at all.

Sulzbach discloses a continuous sandwich element production process (column 1, line 7) having substantial differences from the process disclosed in Larson and the present invention. However, a detailed discussion of the differences between these processes is not necessary in view of the following. Sulzbach does not disclose or teach a two-dimensional movement of the applicator or the discharge orifice. The

Sulzbach applicator is moved in a transverse direction while the lower skin is moved longitudinally.

As set forth in the specification, the present invention is an improvement on the prior art, which merely utilized one-dimensional movement of the applicator with the discharge orifice, i.e. travel transversely in achieving transverse distribution. This is generally sufficient since the second longitudinal direction is already provided by the movement of the conveyer means. The present invention enhances the prior art by providing a second direction of movement of the applicator thereby enhancing the flexibility of the system and boosting performance. Specifically, the application of foam or liquid reactant is now independent of the conveyed movement of the lower skin, thus allowing a wide variety of application patterns and an optimal uniformity of the application and the process time.

It is respectfully submitted that it would not have been obvious to combine Larson and Sulzbach et al. as suggested by the Examiner. The sole motivation for such a combination is impermissible hindsight gleaned only from applicants disclosure. One skilled in the art would not consider combining Larson and Sulzbach et al. because Larson already provides a solution with a multiplicity of orifices. Further, even if one skilled in the art would consider combining Larson and Sulzbach et al., a moveable orifice would replace the multiplicity of orifices within an apparatus according to Larson. However, there would be no reason to further include a second movement direction of the applicator other than to meet the claim limitations. Neither of the references mentions any complicated foam application patterns or structures within the sheets to be covered by the foam, to which the present invention is directed.

In view of the above, it is respectfully submitted that the application is now in condition for allowance.

Respectfully submitted,

Date: 10-01-03

By: 

Joel E. Siegel, Reg. No. 25,440

Attorneys for Applicants
Wood, Phillips, Katz, Clark & Mortimer
Citicorp Center, Suite 3800
500 West Madison Street
Chicago, IL 60661-2511
312-876-1800 Phone